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ABSTRACT

A study compared the reading placement levels of Chapter 1 students as indicated by dynamic and static assessment models to determine whether these students could benefit from basal instruction at a higher level of difficulty than would normally be indicated by static assessment. Subjects, 21 third grade Chapter 1 students, received treatment based on the dynamic assessment paradigm (modeling reading behavior, asking leading questions, and engaging the student in a dialogue) or the static paradigm (standardized tests) of reading level placement. Results indicated that the impact of the dynamic paradigm was to raise the reading level from third to fourth grade. Findings support the use of L. S. Vygotsky's zone of proximal development concept in developing dynamic procedures for reading assessment. (Two tables of data are included; 21 references and examples of word mediation are attached.) (RS)

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Dynamic versus static assessment: A comparison of the effects of each on the reading placement levels of Chapter I students

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Proper placement of students in a basal and/or content book for instruction is an ongoing educational concern. As recent classroom studies indicate, this decision may well affect the amount and type of reading instruction a student receives. Students in lower groups have more emphasis on phonics; spend more time reading orally; and more time is spent on social control of the reading group (Allington, 1983; Allington, 1984; McDermott, 1976). Because of these and other instructional patterns of the low reading groups, the placement decision becomes critical .

Currently, a child is assessed and placed in reading groups using a static model. Standardized reading tests as well as informal reading inventories have established procedures for the administration and interpretation of these tests. While these procedures are necessary for reliabity data, these same procedures place the child in a highly rigid and artificial environment during the testing situation (Wozniak, 1975). It is because of these procedures that one cannot ascertain from the score what affected the child's performance on the test. A child's inability to function on a standardized reading test could be due to (a) lack of background knowledge; (b) inadequate

language development; (c) inadequate reading skills; (d) behavioral characteristics of the child; (e) the student's interpretation of the test response is different than the expected response; or (f) other considerations and combinations of the above (Royer & Cunningham, 1981).

These tests, also, provide no information regarding the amount or type of instruction needed to support adequate reading progress within the context of a reading lesson. As most teachers are aware, these tests help very little in planning instructional procedures which would facilitae the child's learning process (Myers, & Lytle, 1984). Thus, the risk in utilizing these static tests is that the student's ability and potential can be underestimated thereby offering a limited view of the child's competence that will affect the type of teacher/student interaction within the reading group (Wertsch, 1984).

A shift to a dynamic assessment model can provide an indication of the child's level of performance as well as processing information needed to plan an instructional program. There are two basic principles of the dynamic assessment model. " One is that the interaction between the examiner and students is an integral part of the test. Second, the examiner doesn't necessarily accept the student's response as is" (Lidz, 1981, p. 33). During the dynamic assessment, the examiner can investigate the basis for the student's response as well as locate areas that

would help the student make more appropriate responses to the test items (Lidz, 1981). This model, therefore, highlights the amount and type of instruction and teacher support needed to bring about learning (Brown & Ferrara, 1985; Cioffi, G. & Carney, J. 1983; Duffy & Fedner, 1978; Elliot & Piersel, 1982; Hilliard, 1982).

Vygotsky's (1978) zone of proximal development provides a base on which to develop the dynamic assessment model. Vygotsky defined the zone of proximal development as the "distance between the actual developmental level as determined by independent problem solving (reading) and the level of potential development as determined through problem solving under direct adult guidance or in collaboration with more capable peers" (1978, p. 86). Of interest to Vygotsky was the child's developing or maturing intellectual functions, not past achievement. With Vygotsky's approach, the examiner not only determines the student's independent level for functioning but also the student's potential for learning. By giving a student difficult problems to solve, the examiner can provide clues and strategies to help the student solve the problem. This step provieds the examiner with the amount and types of intervention needed to bring about learning (Brown & French, 1979).

Feuerstein's dynamic assessment model parallels Vygotsky's zone concept. The goals of Feuerstein's (1980) model are to assess the modifiability of the individual when

the student is confronted with conditions aiming to produce change and to determine the amount of teacher intervention necessary to bring about a given amount of change. Learning disabled youth tested with Feurstein's model have shown higher intelligence scores than indicated on static measures. However, Feurstein's model baseline data on the students was not collected. Vygotsky's approach would provide the much needed baseline data on an individual student. Using Vygotsky's zone concept, the examiner has a region of learning potential for the student plus information needed to plan an instructional program.

Of interest, is the impact of Vygotsky's zone concept on reading placement levels. Initial pilot studies investigating the impact of the dynamic assessment model have indicated higher reading levels than obtained with the static assessment model. Average and below average readers were assessed on passages two years above their current reading placement. These students could read and comprehend these higher level materials. These studies used expository as well as narrative materials (Dixon, 1983; Newman, 1983).

This investigation was designed to compare the reading placment levels between the dynamic assessment and static assessment models of low socioeconomic Chapter I students. The study explored whether these students could benefit from basal instruction at a higher level of difficulty than would

normally be indicated by the assessment using the static paradigm.

Procedure

Design

The design of the study was a randomized pre-post test design. All students were given an informal reading inventory (IRI) as a pretest measure. The administration of the IRI followed standard procedures. This assessment provided the students'static independent, instructional, and frustration reading levels. From this assessment, it was determined that the silent passages at the third and fourth levels were at the students' frustration silent reading levels. Passages at the 4th and 5th grade levels were at the students' frustration listening level.

Subjects

Twenty one third grade Chapter I subjects were included in the study. Of the 21 subjects, 6 were white and 15 were minority students. Seventeen of the children were on the school's free or reduced price lunch program. Table one indicates the students' reading levels on static measures of reading placement and achievement. Following the pretest , the students were randomly assigned to an experimental

group, which received a treatment based on the dynamic paradigm, and a control group which received a treatment based on the static paradigm.

Table I - Reading Placements of Subjects

Placement tests	Grade Levels				
	P	1	2	3	4
Basal Placement		1	3	15	2
Houghton Mifflin Informal Reading Inventory- Pretest silent passages	4	8	6	3	
Gates MacGinitie Reading- Test, 1978, Level C, Comprehension Section	1	3	12	5	

Materials

Materials used in the study consisted of the Houghton Mifflin Reading Inventory (IRI), silent and oral forms, and a basal story.

Passages: As determined from the static assessment, the silent IRI passages at the 3rd and 4th grade levels were at the frustration level for the silent reading. These passages had 225 and 302 words with readability levels of 3.0 and 4.2. The oral passages at the 4th and 5th levels

were at the students' frustration listening levels. These passages had 302 and 279 words with readability levels of 4.2 and 4.7. The basal story was at the 4.3 readability level with 706 words. This was at the students' frustration level for silent reading.

Recall: A simple description schema was used to generate a list of recall events (McConaughy, 1980). This schema offers a basic form for retelling explicitly stated events in the story. Each passage had 20 recall units. Both free and prompted recall were used in the study.

Treatment: A mediation strategy used in the study was a dialogue between the researcher and students. Five vocabualry words from each passage were chosen to be the focus of the mediation. The words were chosen because they (a) were crucial to the theme of the passage, (b) were identified in the manual as being important, or (c) were computer-generated words not found on Spache's list of common words for the primary level.

The procedure for the mediation was the following: (a) the word was read to the student in isolation and in context, (b) the student attempted a definition, (c) the student was guided through questions that helped them generate examples and nonexamples of the word; (d) the student generated synonyms, antonyms, sentences, and another definition of the word. After the dicussion, the words were flashed to the student. (See Appendix A for an example.)

Scoring procedures: A key of the schema statements was used to score the subjects' recall. Responses were scored as correct if they matched the key verbatim. Paraphrasing was accepted as long as it contained the key statements but were expressed in alternative language.

Goodman's retelling comprehension scores were used to judge the quality of the recall. Goodman's score of 40% and below was used as an indication of the frustration level. A comprehension scores between 40-55% was indicative of the instructional level. A score above 55% was used to determine the independent level (Goodman & Burke, 1971).

Procedures

Experimental Group Treatment

Phase 1

These students received the vocabulary mediation prior to reading the level 3 and level 4 informal reading inventory passages. After the discussion of the words, the students read each passage once silently. Recall of the story followed the reading of the passage.

Phase 2

The students received the mediation of the vocabulary words prior to the listening to the level 4 and 5 informal reading inventory passages. The students listened once to the passage and comprehension was assessed by recall.

Phase 3

During this phase, the experimental students were grouped to form an instructional unit. The mediation was given in a setting similar to a reading group: however, comprehension was assessed individually. Once in the reading group, the students received the mediation of the vocabulary words of the basal story . The vocabulary mediation followed the same procedure as in phase I and II of the study. Following the vocabulary mediation, the background was developed and purposes were set, the students silently read the story once. After the students were finished with the story, it was turned in and the students returned to their seats until it was their turn for recalling the story.

Control Group Treatment

Phase 1

These students were not given the vocabulary treatment prior to the reading of the level 3 and 4 informal reading inventory passages. To offset the mediation of the experimental group, the control group did repeated readings of the passages. Each passage was read twice by the these students. Following the second reading of the story, comprehension was assessed using story recall.

Phase 2

The students, again, were not given any treatment prior to the reading of the passages but the researcher read the

level 4 and 5 passages twice to the subjects before comprehension was assessed by story recall.

Phase 3

The students were grouped to form an instructional unit. They received a traditional directed reading lesson. The vocabulary was introduced. The students defined the new words and used them in sentences. After the background was built and purposes were set, the students read the story once. Once they were finished, the stories were turned in and the students waited at their seats for their turn to retell the story. The retelling was done individually.

RESULTS

THe analysis of the covariance was used to assess the effects of the dynamic assessment procedures over the static assessment procedures. Covariance analysis was used to assess any interaction between the mediation and the comprehension posttest scores. All tests of significance were conducted at the .05 level. Table 2 presents the mean number of units recalled by both the experimental and control groups. The table also includes the adjusted means, standard deviations, and % of recall units on the posttest paragraphs for both groups.

Interaction with comprehension: The regression lines indicated there was no significant interaction between the mediation and comprehension posttest scores.

Effects of mediation: The covariance analysis indicated that the main effects of the mediation were statistically significant at all passage levels except the IRI passage level 4-silent reading $t(2,18)=1.57, p > .05$. The main effects of the other IRI passages were: silent reading level 3 $t(2,18)=2.19, p < .05$; listening level 4 $t(2,18)=2.16, p < .05$; and listening level 5 $t(2,18)=3.12, p < .05$.

The main effects on the basal story at the 4.3 grade level was also statistically signficant. The covariance analysis indicated $t(2,18)=3.14, p < .05$.

Table II - Means, Adjusted Means, Standard Deviations and % correct of comprehension posttest scores

	Silent IRI Levels		Oral IRI Levels		Basal
	3	4	4	5	4
Treatment Group					
Experimental					
Means	8.54	6.36	9.54	8.63	9.63
Adjusted means	9.18	6.58	9.00	8.97	9.50
SD	5.50	6.72	4.18	7.25	3.41
% correct	42	31	48	43	47

Control					
Means	7.10	4.30	7.25	2.30	5.10
Adjusted means	6.40	5.98	5.29	1.92	5.24
SD	5.42	4.00	5.37	4.88	2.76
% correct	31	21	23	11	25

DISCUSSION

Vygotsky's zone of proximal development is clearly supported by the results of the study. The experimental students' instructional level as determined by the static assessment was the third grade level. The impact of the mediation was to raise the instructional level to the fourth grade level. By giving the students support prior to the assessment, their level of functioning was raised close to one year. This higher placement was maintained during the mediated basal lesson. Vygotsky stressed the concept that instruction precedes development. The teacher can create more growth by providing support on higher level materials that the students can read independently. By modeling reading behavior, asking leading questions, and engaging the students in a dialogue, students' reading growth will be higher than the traditional testing allows. The key to the effectivness of the zone of proximal development is the

support of the teacher and the active engagement of the student in the reading activity. However, the higher placements of the dynamic assessment paradigm necessitates a more supportive teaching process. As evidenced by the control group, higher reading placements could not be maintained with a traditional reading lesson.

During the static assessment, the students exhibited self-defeating and impulsive test taking behavior. Some students made wild guesses at the words while others waited hoping that the examiner would provide the answers. Many wanted to stop after reading one passage. They felt as though they had completed enough and were not interested in going further. This happened even with students who were experiencing success. These students limited their efforts and performance during the pretest. Each had a preconceived notion about themselves as a reader and were not open to experiences that might counter their concepts as learners. Consequently it was difficult to get a clear picture of their reading ability.

Due to the mediation, the dynamic assessment was effective along at least two dimensions. First, because of the mediation the students' perception of the task changed. The task was no longer a test but rather a dialogue prior to the reading of a passage. This situation became more like a lesson for the student. This helped relax some of the

students and many of their ineffective test taking behaviors were diminished.

Secondly, the content of the dialogue was effective because it increased the students' engagement in the task. They had to respond to the questions in the dialogue. Since the questions were aimed at their knowledge base, they were quite interested and willing to talk about the words. Consequently, their performance on the task improved due to their actual engagement in the task. A related side effect of the dialogue was that it helped activate any prior knowledge the students may have had about the words. While their knowledge base of the words was quite limited, the dialogue may have helped them refine their knowledge about the chosen words.

In conclusion, there is support for the use of Vygotsky's zone concept in developing dynamic procedures for reading assessment. Given mediation, students can be placed and sustain higher placements than indicated by the static assessment. Also, the discussion technique was helpful in increasing the students' comprehension of the passages and the story. However, with the dynamic procedures, the goal is to put the students at a level that will promote the most growth. One would not place too far within the zone of reading even with the dynamic procedures. The key to the successful use of the dynamic procedures and learning within the zone is both the support of the teacher and the active

participation of the child in the reading process. Further research is recommended in analyzing a variety of mediational strategies to achieve maximum growth in the reading process.

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Appendix A

Examples of the Word Mediation

EXAMPLE 1--wonder

1. The word was read to the student in isolation and in context.

   a. wonder
   b. Sammy wondered about how to solve the math problem.

2. The student attempted a definition of the word.

3. The students were asked the following questions:

   a. Do you ever wonder about what you will be when you grow up?
   b. What else do you wonder about?
   c. When you answer a question, do you still wonder about it?
   d. Who else wonders? Who might not wonder?

4. The students were asked to:

   a. generate other words that meant the same as the key word
   b. generate a sentence with the key word
   c. generate a definition of the word

5. The students read the word.

EXAMPLE 2--bounded

1. The word was read to the student in isolation and in context.

   a. bounded
   b. The deer bounded through the forest.

2. The students attempted a definition of the word.

3. They were guided through the following discussion:

   a. Can you move like the deer?
   b. Can turtles bound through the forest?
   c. Can you think of any animals that can bound?
   d. Can you think of any animals that can't?

4. The students were asked to:

   a. generate other words that meant the same as bounded
   b. generate a sentence with the word
   c. generate a definition

5. The students read the word.